1. **(Currently Amended)** A process for characterizing DNA comprising a step of isolating nucleic acids, wherein the step of isolating comprises the steps of:

(a) contacting a biological material that contains DNA with a solid support treated with a lysing reagent wherein the solid support has not contacted the biological material at the time of treatment;

(b) treating the biological material that contains DNA with a DNA purifying reagent;

(c) purifying the DNA from the remainder of the biological material; and

(d) analyzing the purified DNA,

wherein the lysing reagent is bound to the solid support and any unbound lysing reagent is removed from the solid support~~.~~, wherein the lying reagent essentially comprises low concentrations of reagents selected from the group of reagents consisting of buffers, salts, acids, bases, chelating agents, and detergents.

2. **(Currently Amended)** A process for characterizing DNA comprising the step of isolating nucleic acids, wherein the step of isolating comprises the steps of:

(a) contacting a biological material that contains DNA with a solid support treated with a lysing reagent wherein the solid support has not contacted the biological material at the time of treatment;

(b) treating the biological material that contains DNA with a DNA purifying reagent;

(c) applying a DNA eluting reagent to the solid support; and

(d) purifying the DNA from the remainder of the biological material,

wherein the DNA eluting reagent comprises:

(i) a buffer;

(ii) a base;

(iii) a chelating agent; and

(iv) water,

wherein the lysing reagent is bound to the solid support and any unbound lysing reagent is removed from the solid support ~~.~~, wherein the lying reagent essentially comprises low concentrations of reagents selected from the group of reagents consisting of buffers, salts, acids, bases, chelating agents, and detergents.

3. **(Previously Presented)** The process of claims 1 or 2, wherein the solid support is contained in a vessel, wherein the vessel is selected from a group consisting of centrifuge tubes, spin tubes, syringes, cartridges, chambers, multiple-well plates, test tubes, and combinations thereof.

4. **(Previously Presented)** The process according to claims 1 or 2, comprising the further step of heating the solid support to greater than 60°C.

5. **(Previously Presented)** The method of claims 1 or 2, wherein the biological material is selected from the group consisting of eukaryotic cells, prokaryotic cells, microbial cells, bacterial cells, plant cells, mycoplasma, protozoa, [bacteria,] fungi, viruses, and lysates and homogenates thereof.

6. **(Previously Presented)** The method of claims 1 or 2, wherein the biological material is selected from the group consisting of body fluids, body waste products, excretions, and tissues.

7. **(Previously Presented)** The method of claims 1 or 2, wherein the biological material is an environmental sample taken from air, water, sediment or soil.

8. **(Previously Presented)** The process according to claim 5, further comprising the step of counting eukaryotic cells when the biological material is eukaryotic cells.

9. **(Previously Presented)** The process according to claim 5, further comprising the step of counting prokaryotic cells when the biological material is prokaryotic cells.

10. **(Previously Presented)** The process according to claim 5, further comprising the step of counting viruses when the biological material is viruses.

11. **(Canceled)**

12. **(Previously Presented)** The process according to claims 1 or 2, wherein the isolating step further comprises the step of analyzing the remainder of the biological material.

13. **(Currently Amended)** The process according to claim ~~11~~ 12, wherein the analyzing step further comprises the step of monitoring impurities.

14. **(Previously Presented)** The process according to claim 12, wherein the analyzing step further comprises the step of monitoring impurities.

15. **(Previously Presented)** The process according to claims 1 or 2, further comprising the step of quantitating the purified DNA.

16. **(Previously Presented)** The process according to claims 1 or 2, further comprising the step of adjusting the concentration of DNA.

17. **(Previously Presented)** The process according to claims 1 or 2, further comprising the step of evaluating the purified DNA.

18. **(Previously Presented)** The process according to claim 17, wherein the step of evaluating the purified DNA further comprises the step of determining the yield of purified DNA.

19. **(Previously Presented)** The process according to claim 17, wherein the step of evaluating the purified DNA further comprises the step of determining the size of the purified DNA or fragments thereof.

20. **(Previously Presented)** The process according to claim 17, wherein the step of evaluating the purified DNA further comprisesa step of determining the purity of DNA.

21. **(Previously Presented)** The process according to claim 17, wherein the step of evaluating the purified DNA further comprises a step of digesting the purified DNA with a restriction enzyme or other DNA modifying enzyme.

22. **(Previously Presented)** The process according to claim 17, wherein the step of evaluating the purified DNA further comprises a step of analyzing the sequence of the purified DNA.

23. **(Previously Presented)** The process according to claim 17, wherein the step of evaluating the purified DNA further comprises a step of conducting a hybridization analysis on the purified DNA.

24. **(Previously Presented)** The process according to claim 1, further comprising a step of amplifying the purified DNA.

25. **(Previously Presented)** The process according to claim 2, further comprising a step of amplifying the purified DNA.

26. **(Currently Amended)** A process for amplifying DNA sequences, wherein the process comprises the steps of:

(a) contacting a biological material that contains DNA with a solid support treated with a lysing reagent wherein the solid support has not contacted the biological material at the time of treatment;

(b) treating the biological material with a DNA purifying reagent;

(c) purifying the DNA; and

applying the purified DNA to an amplification system, wherein the lysing reagent is bound to the solid support and any unbound lysing reagent is removed from the solid support before the biological material is contacted with the solid support~~.~~, wherein the

lying reagent essentially comprises low concentrations of reagents selected from the group of reagents consisting of buffers, salts, acids, bases, chelating agents, and detergents.

27. **(Currently Amended)** A process for amplifying DNA sequences, wherein the process comprises the steps of:

(a) contacting a biological material that contains DNA with a solid support reated with a lysing reagent wherein the solid support has not contacted the biological material at the time of treatment;

(b) treating the biological material with a DNA purifying reagent;

(c) applying a DNA eluting reagent to the solid support;

(d) purifying the DNA; and

(e) applying the purified DNA to an amplification system,

wherein the DNA eluting reagent comprises:

(i) a buffer;

(ii) a base;

(iii) a chelating agent; and

(iv) water.

, wherein the lying reagent essentially comprises low concentrations of reagents selected from the group of reagents consisting of buffers, salts, acids, bases, chelating agents, and detergents.

28. **(Previously Presented)** The process of claims 26 or 27, wherein the solid support is contained in a vessel, wherein the vessel is selected from the group consisting of centrifuge tubes, spin tubes, syringes, cartridges, chambers, multiple-well plates, test tubes, and combinations thereof.

29. **(Previously Presented)** The process of claims 26 or 27, wherein the biological material is selected from the group consisting of eukaryotic cells, prokaryotic cells, microbial cells, bacterial cells, plant cells, mycoplasma, protozoa, fungi, viruses, and lysates and homogenates thereof.

30. **(Previously Presented)** The process of claim 26 or 27, wherein the biological material is selected from the group consisting of body fluids, body waste products, excretions, and tissues.

31. **(Previously Presented)** The method of claim 26 or 27, wherein the biological material is an environmental sample taken from air, water, sediment or soil.

32. **(Previously Presented)** The process of claims 26 or 27, wherein the biological material is applied to the solid support without any prior treatment of the biological material.

33. **(Previously Presented)** The process of claims 26 or 27, wherein the solid support is selected from the group consisting of cellulose, cellulose acetate, glass fiber, nitrocellulose, nylon, polyester, polyethersulfone, polyolefin, polyvinylidene fluoride, and combinations thereof.

34. **(Previously Presented)** The process of claim 33, wherein the polyolefin is a mixture of low density polyethylene and polypropylene fibers.

35. **(Previously Presented)** The process of claim 33, wherein the polyolefin is hydrophilic.

36. **(Original)** The process of claim 33, wherein the polyolefin has a charge.

37. **(Previously Presented)** The process of claim 33, wherein the lysing reagent comprises:
    (a) a detergent effective to lyse the biological material sufficiently to release DNA;
    (b) water; and optionally
    (c) an RNA digesting enzyme.

38. **(Previously Presented)** The process of claim 33, wherein the lysing reagent comprises:
    (a) a detergent effective to lyse the biological material sufficiently to release DNA;
    (b) water; and optionally
    (c) an RNA digesting enzyme; but

(d) does not contain a buffer.

39. **(Previously Presented)** The process of claim 33, wherein the lysing reagent comprises:
(a) a detergent effective to lyse the biological material sufficiently to release DNA;
(b) water; and optionally
(c) an RNA digesting enzyme; but
(d) does not contain a chelating agent.

40. **(Previously Presented)** The process of claim 33, wherein the lysing reagent comprises:
(a) a detergent effective to lyse the biological material sufficiently to release DNA;
(b) a chelating agent to reduce damage to DNA;
(c) water; and optionally
(d) an RNA digesting enzyme; but
(e) does not contain a buffer.

41. **(Previously Presented)** The process of claim 33, wherein the lysing reagent comprises:
(a) a detergent effective to lyse the biological material sufficiently to release DNA;
(b) a buffer;
(c) water; and optionally
(d) an RNA digesting enzyme; but
(e) does not contain a chelating agent.

42. **(Previously Presented)** The process of claim 27, wherein the DNA eluting reagent has a pH of at least about 10, and the combined concentration of buffer, base, and chelating agent is no greater than about 20 mM, based on the total volume of the DNA eluting reagent.

43. **(Previously Presented)** The process of claim 27, wherein the DNA eluting reagent has a pH of at least about 9, and the combined concentration of buffer, base, and chelating agent is no greater than about 20 mM, based on the total volume of the DNA eluting reagent.

44. **(Previously Presented)** The process of claims 26 or 27, further comprising the step of heating at greater than 60°C.

45. **(Previously Presented)** The process of claims 24 or 25, further comprising the step of amplifying using an amplification system.

46. **(Previously Presented)** The process of claim 26, 27, or 45, wherein the amplification system comprises buffer, primers, deoxyribonucleotides, a thermostable DNA polymerase, and a programmable heating element.

47. **(Previously Presented)** The process of claims 26, 27, or 45, further comprising the step of quantitating the amplified DNA.

48. **(Previously Presented)** The process of claims 26, 27, or 45, further comprising the step of evaluating the amplified DNA.

49. **(Previously Presented)** The process of claim 48, wherein the step of evaluating the amplified DNA further comprises a step of determining the size of the amplified DNA.

50. **(Previously Presented)** The process of claim 48, wherein the step of evaluating the amplified DNA further comprises a step of digesting the amplified DNA with a restriction enzyme.

51. **(Previously Presented)** The process according to claim 48, wherein the step of evaluating the amplified DNA further comprises a step of sequencing the amplified DNA.

52. **(Previously Presented)** The process according to claim 48, wherein the step of evaluating the amplified DNA further comprises a step of analyzing the sequence of the amplified DNA.

53. **(Previously Presented)** The process according to claim 48, wherein the step of evaluating the amplified DNA further comprises the step of conducting a hybridization analysis on the amplified DNA.

54. **(Previously Presented)** A process for analyzing DNA comprising a step of isolating nucleic acids, wherein the step of isolating comprises the steps of:

(a) contacting a biological material that contains DNA with a solid support treated with a lysing reagent wherein the solid support has not contacted the biological material at the time of treatment;

(b) heating the solid support;

(c) treating the biological material that contains DNA with a DNA purifying reagent;

(d) purifying the DNA from the remainder of the biological material; and

(e) analyzing the purified DNA;

wherein the lysing reagent is bound to the solid support; wherein the lysing reagent is bound to the solid support and dried to the solid support.

55. **(Previously Presented)** A process for amplifying DNA sequences, wherein the process comprises the steps of:

(a) contacting a biological material that contains DNA with a solid support treated with a lysing reagent wherein the solid support has not contacted the biological material at the time of treatment;

(b) treating the biological material with a DNA purifying reagent;

(c) purifying the DNA; and

(d) applying the purified DNA to an amplification system,

wherein the lysing reagent is bound to the solid support and dried to the solid support.

56. **(Previously Presented)** The process of claim 1, wherein the lysing reagent comprises:

(a) a detergent effective to lyse the biological material sufficiently to release DNA;

(b) water; and optionally

(c) an RNA digesting enzyme.

57. **(Previously Presented)** The process of claim 1, wherein the lysing reagent comprises:

(a) a detergent effective to lyse the biological material sufficiently to release DNA;

(b) water; and optionally

(c) an RNA digesting enzyme; but

(d) does not contain a buffer.

58. **(Previously Presented)** The process of claim 1, wherein the lysing reagent comprises:

(a) a detergent effective to lyse the biological material sufficiently to release DNA;

(b) water; and optionally

(c) an RNA digesting enzyme; but

(d) does not contain a chelating agent.

59. **(Previously Presented)** The process of claim 1, wherein the lysing reagent comprises:

(a) a detergent effective to lyse the biological material sufficiently to release DNA;

(b) a chelating agent to reduce damage to DNA;

(c) water; and optionally

(d) an RNA digesting enzyme; but

(d) does not contain a buffer.

60. **(Previously Presented)** The process of claim 1, wherein the lysing reagent comprises:

(a) a detergent effective to lyse the biological material sufficiently to release DNA;

(b) a buffer;

(c) water; and optionally

(d) an RNA digesting enzyme; but

(e) does not contain a chelating agent.

61. **(Previously Presented)** The process of claim 1, wherein the lysing reagent is anionic.

62. **(Previously Presented)** The process of claim 26, wherein the lysing reagent is anionic.